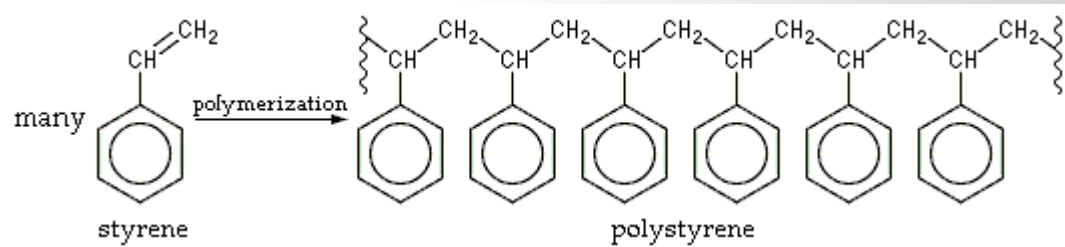


# **Mystery Artifact**

Sam Oliver and Justin Olson

# Polystyrene Plastic

- Polystyrene plastic is a thermoplastic polymer used in the popular childrens toy shrinky dinks.
- If heated above 100 degrees celsius its form begins to change and shrink.

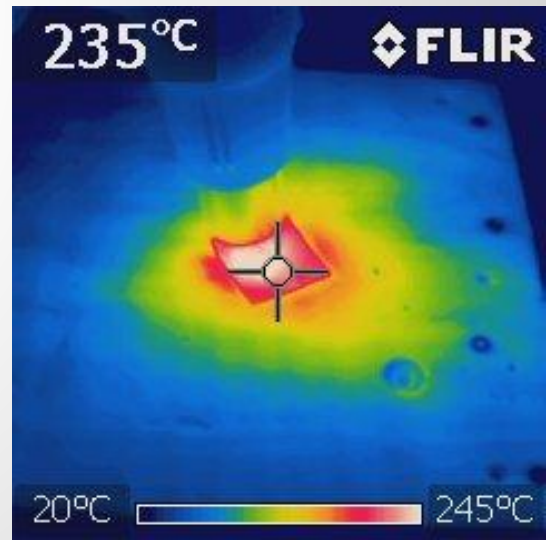
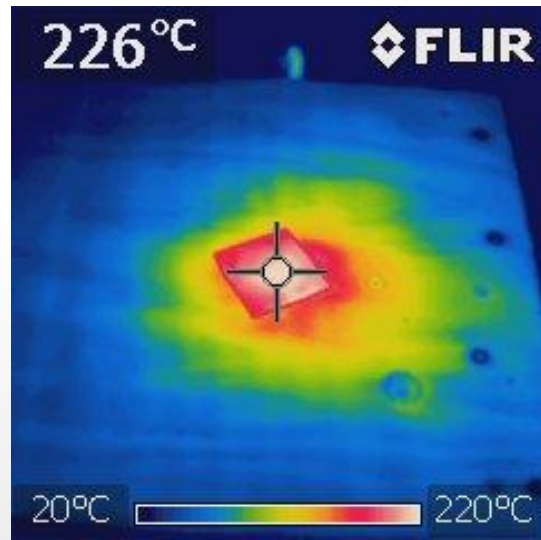
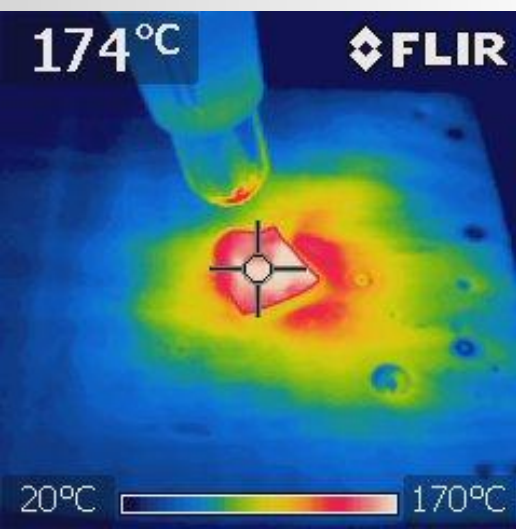
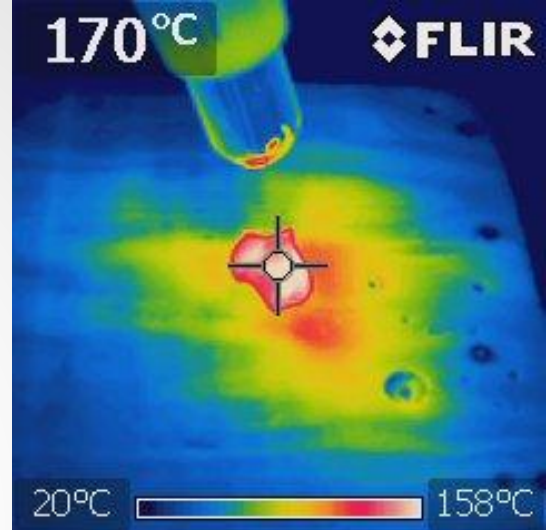
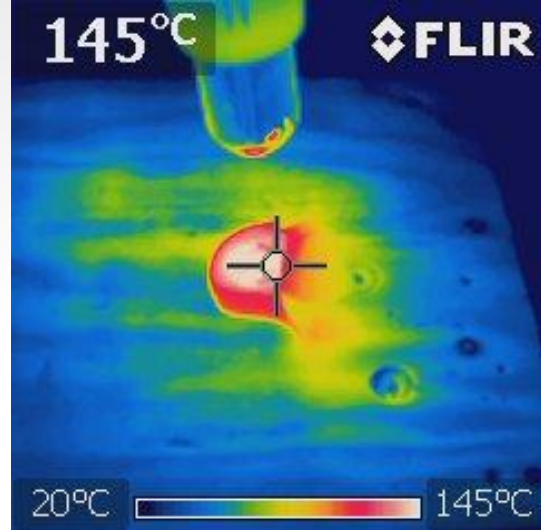
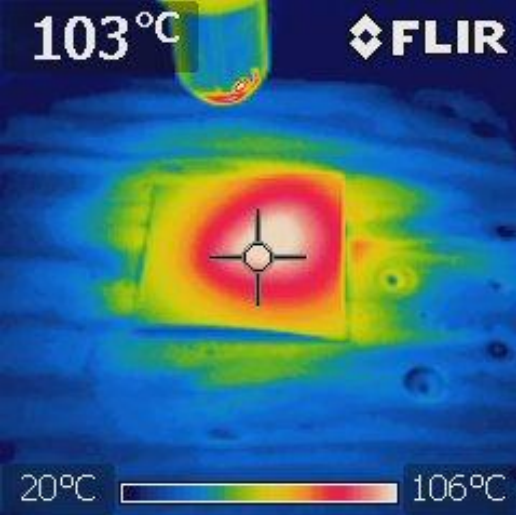


# Possible Applications

- The exact ratio of size change can be calculated and used to create objects that are too small to be accurately created, can be made large scale and shrunk.
- The force made by shrinking can pull objects together, and fold things like origami just by adding heat.

# Video of The Shrinky Dink

<http://www.youtube.com/watch?v=ISbmtmBjlwA&feature=youtu.be>



# Size Change

Length	Width	Total Area	Ratio Area Change
10 cm	10 cm	100 cm <sup>2</sup>	Factor 5.14
4.4 cm	4.42 cm	19.448 cm <sup>2</sup>	
5 cm	5 cm	25 cm <sup>2</sup>	Factor 5.44
2.23 cm	2.06 cm	4.594 cm <sup>2</sup>	
6 cm	6 cm	36 cm <sup>2</sup>	Factor 4.88
2.72 cm	2.71 cm	7.371 cm <sup>2</sup>	

